

WHAT IS CLAIMED IS:

1. An electric rotating machine, comprising:
  - a middle core comprising plural plates (2A, 23A) stacked in an axial direction,
  - an outer core disposed outside the middle core, and which rotates relative to the middle core, and
  - an inner core disposed inside the middle core, and which rotates relative to the middle core,
  - wherein the plural plates are joined to a first fixing member by a connecting member.
2. An electric rotating machine as defined in Claim 1, wherein the connecting member is a bolt, and a hole through which the bolt passes is formed in the plural plates.
3. An electric rotating machine as defined in Claim 1, wherein the plates are ring-shaped thin plates.
4. An electric rotating machine as defined in Claim 1, wherein the middle core and inner core are rotor cores, and the outer core is a stator core.
5. An electric rotating machine as defined in Claim 1, wherein the middle core is a stator core, and the outer core and inner core are rotor cores.
6. An electric rotating machine as defined in Claim 5, wherein the stator core is

formed by a plural split core, the connecting member is a bolt, and a space through which the bolt passes is formed between adjacent split cores.

7. A method of manufacturing an electric rotating machine, the machine having a middle core comprising plural plates stacked in an axial direction, an outer core disposed outside the middle core which rotates relative to the middle core, and an inner core disposed inside the middle core which rotates relative to the middle core, and the method comprising:

joining the plural plates to a first fixing member by a connecting member, and

finishing the inner and outer circumferential surfaces of the plural plates in the state where the plural plates are joined only to the first fixing member.

8. A method of manufacturing an electric rotating machine as defined in Claim 7, further comprising joining the opposite side of the plural plates to the first fixing member, to a second fixing member after finishing.

9. A method of manufacturing an electric rotating machine as defined in Claim 7, wherein the connecting member is a bolt, a hole through which the bolt passes is formed in the plural plates, and the plural plates are joined to the first fixing member by passing the bolt through the hole.